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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/048,054	01/25/2002	Masashi Otsuki	111788	8751
7590	05/13/2004		EXAMINER	
Oliff & Berridge P O Box 19928 Alexandria, VA 22320			LE, HOA VAN	
			ART UNIT	PAPER NUMBER

1752

DATE MAILED: 05/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/048,054

Applicant(s)

OTSUKI ET AL.

Examiner

Hoa V. Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 April 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15 (broadest), 1-10 and 16-20 is/are rejected.
- 7) ☒ Claim(s) 11-14 is/are objected to.
- 8) ☒ Claim(s) 1-10 and 15-20 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☒ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 25 January 2002.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

This is in response to the Election received on 26 April 2004.

I. Claims 11-14 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim 10. See MPEP § 608.01(n). Accordingly, the claims 11-14 have not been further treated on the merits. Applicants were given an opportunity to make a proper correction on the record.

In addition, the proper language is ---or--- that must be used in all multiple dependent claims.

II. The record shows that applicants fail to show or provide an evidence that (1) there are more than one patentably different or distinct invention of the groups of the claims and (2) there are requested to distinctly do, work or perform for more than one separate consideration and search. The election of claims 15-18 with traverse is improper. Accordingly, (1) the broadest claim 15 is considered and searched and (2) other claims 1-10 and 16-20 are integrally considered and searched.

III. Applicants elect (1) LiBF₄, (2) EO-type phosphazene containing substance, (3) gamma butyrolactone species with traverse being acknowledged. Applicants urge that all species search is not burdensome. The examiner contends that they are. Applicants fail to provide an evidence that (1) all of the species have searched by applicants, assignee and/or their counsel and (2) such evidence has been submitted to the Office for consideration for the record. Applicants should

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show or provide a convincing evidence to the contrary. The same would also applied for an election of the invention with traverse. The elected species on the record have been considered and searched. The consideration and search are extended to the applied species. Others have not been considered, searched or examined until all of the applied and applied species are overcome.

IV. The record shows that (1) all claims from 1-20 are not patentable over each of Japanese patents Nos. '757 and '108 as submitted and (2) claims 1-9 and 11-20 are not patentable over Japanese patent No. '431 as submitted in the International Preliminary Examination Report No. PCT/JP00/05053 on the record. It is repeated as followed:

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The following documents were all cited in the international search report.

Document 1: JP, 11-144757, A (Bridgestone Corp.), 28 May 1999 (28.05.99) (Family: none)

Document 2: JP, 6-13108, A (Bridgestone Corp.), 21 January 1994 (21.01.94) (Family: none)

Document 3: JP, 11-191431, A (Sony Corp.), 13 July 1999 (13.07.99) (Family: none)

Comments

Claims 1 to 7 are not novel in the light of above Documents 1 and 2. Documents 1 and 2 each disclose inventions which meet conditions shown in the present application, including the use of a specified phosphazene derivative as an electrolyte, a viscosity for the phosphazene derivative, the mixing of a phosphazene derivative with another electrolyte solvent and ratios in such a case, and various types of solute. (See especially disclosures in the embodiments; an embodiment which fulfills the conditions for an organic group described in Claim 7 is disclosed.)

Claims 8 to 20 are not novel in the light of above Documents 1 and 2. Documents 1 and 2 do not specifically

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disclose conditions pertaining to flash point, potential window, conductivity, or relative permittivity, but they do disclose, as a specific compound group, compounds which are the same as the compound group described in the detailed description as fulfilling the conditions of the present application. Therefore, the compounds disclosed in Documents 1 and 2 would, if measured, fulfill the conditions for each attribute described in the present application.

Claims 1 to 7 are not novel in the light of above Document 3. Document 3 discloses inventions which meet conditions shown in the present application, including the use of a specified phosphazene derivative as an electrolyte, the mixing of a phosphazene derivative with another electrolyte solvent and ratios in such a case, and various types of solute. Moreover, Document 3 does not disclose viscosity, but because the phosphazene described in the present application and disclosed in Document 3 are the same, the phosphazene disclosed in Document 3 would, if measured, naturally fulfill the conditions for viscosity described in the present application.

Claims 8, 9, and 11 to 20 are not novel in the light of above Document 3. Document 3 does not specifically disclose conditions pertaining to viscosity, flash point, potential window, conductivity, or relative permittivity, but it does disclose, as a specific compound group, compounds which are the same as the compound group described in the detailed description as fulfilling the conditions of the present application. Therefore, the compounds disclosed in Document 3 would, if measured, fulfill the conditions for each attribute described in the present application.

V. Applicants' prior art submission filed on 25 January 2004 has been considered to the extent of the English language as provided.

VI. A. (1) It is allowed to claim by a functional, characteristic, physical and/or chemical property of a material and /or process. (2) However, a claimed functional, characteristic, physical and/or chemical property of a material and/or process carries with a risk (In re In re Schreiber, 44 USPQ2d 1432). It is reasonable that the Office is not supplied, provided or equipped with a sufficient facility to carry out a test for the functional, characteristic, physical and/or chemical properties as claimed in accordance with the authority stated in In re Best, 195 USPQ 430; Ex parte Maizel, 27 USPQ2d 1662 or Ex parte Phillip, 28 USPQ2d 1302. The language "supporting salt", "derivative", "electroconductitvity..." or the like is considered as the functional, characteristic, chemical and/or physical property of a material.

(B) In re Schreiber, 44 USPQ2d 1429 state that "A patent applicant is free to recite features of an apparatus either structurally or functionally. See In re Swinehart... 169 USPQ 226, 228... Yet, choosing to define an element functionally, i.e., by what it does, carries with a risk. As our predecessor court state in Swinehart... where the Patent Office has reasons that the functional limitation asserted to be critical for establishing novelty in the claimed subject mater may, in fact, be an inherent characteristic of the prior art, it possesses the authority to require the applicant to prove that the subject matter shown to be in the prior art does not possess the characteristic relied on."

VII. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-10 and 15-20 are provisionally rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese patent No. '757 as submitted by applicants on the record with a brief English language abstract until a substantially full English language equivalent is submitted for the record. It must be submitted prior to or at the same time with a submission of an appeal brief. Otherwise, the appeal brief will be dismissed.

The basic for the rejection is already stated in paragraph "III" above as submitted by applicants.

VIII. Claims 1-10 and 15-20 are provisionally rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese patent No. '108 as submitted by applicants on the record with a brief English language abstract until a substantially full English language equivalent is submitted for the record. It must be submitted prior to or at the same time with a submission of an appeal brief. Otherwise, the appeal brief will be dismissed.

The basic for the rejection is already stated in paragraph "III" above as submitted by applicants.

IX. Claims 1-9 and 15-20 are provisionally rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese patent No. '431 as submitted by applicants on the record with a brief English language abstract until a substantially full English language equivalent is submitted for the record. It must be submitted prior to or at the same time with a submission of an appeal brief. Otherwise, the appeal brief will be dismissed.

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The basic for the rejection is already stated in paragraph "III" above as submitted by applicants.

X. Claims 1-10 and 15-20 are provisionally rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese patent Nos. '431 and ('757 and '108) as submitted by applicants on the record with brief English language abstracts until a substantially full English language equivalents are submitted for the record. It must be submitted prior to or at the same time with a submission of an appeal brief. Otherwise, the appeal brief will be dismissed.

The basic for the rejection is already stated in paragraph "III" above as submitted by applicants with Japanese Patent Nos. '757 and '108 are cited for an inherency of the embodiment in claims 10 on the record in the International Preliminary Examination Report. Since the above references are related to batteries, it would have been obvious to one having ordinary skill in the art at the time the invention was made to cite or use a low viscosity electrolyte solution in order for it to migrate between a separator to obtain a maximum power output as known and desired in the art. Applicants should show or provide an convincing evidence there is no inherency for the patentability of the claim property to avoid any late work that may be required. A claim property would have no value if it is later found to be known or used in the art.

XI. Claims 15, 1-10 and 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakacho et al (5,114,809) and Daifuku et al (5,108,855).

Nakacho et al disclose, teach and suggest the use of a secondary battery having a non-aqueous electrolyte solution containing a phosphazene containing substance as the main thrust in

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the instantly claimed invention, a salt. Please see the whole disclosure of the each of the applied reference, especially in Nakacho et al at col.2:63 to 4:54 and Examples. For additional teachings and suggestions,...especially see Daifuku et al at col.9:18 for the elected gamma butyrolactone. The claimed properties have been considered but are reasonably found to be inherent in the battery art. As required by law that applicants must provide a convincing evidence that there is no inherency for the patentability of the claims. In the absence of convincing evidence the claims are not patentable over the applied references on the record. Since the above references are related to secondary batteries, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use or cite the known use of gamma butyrolactone for Daifuku et al in Nakacho et al secondary battery for the desired advantage of obtaining a low viscosity electrolyte solution in between a separator to obtain a maximum power output as known and desired in the art. The showings in the instant application have been carefully studied but are much broader than those as claimed. Especially, there is no convincing evidence that there is no inherency as applied on the record being found for an allowance of the claims. Applicants are urged to early come forward with a convincing evidence to the contrary to speeding up the prosecution and to avoid a late work that may be required. A claim property would have no value if it is late show to be known or use in the art.

XII. Ogino et al (5,153,082) disclose, teach and suggest that there may be a use of a phosphazene containing substance in a secondary battery but fail to demonstrate or reduce to practice to obtain and recognize its property benefit. It has and is given a little value than the applied primary reference with respect Nakacho et al in paragraph XI above.

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XIII. Applicants state that priority document No. '240 is already submitted in PCT/JP00/05053 being acknowledged.

XIV. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoa V. Le whose telephone number is 571-272-1332.

The examiner can normally be reached from 6:30 AM to 4:00 PM on Monday through Thursday and about the same time of most Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark F. Huff can be reached on 571-272-1385

Applicants may file a paper by (1) fax with a central facsimile receiving number 703-872-9306,

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hoa V. Le
Primary Examiner
Art Unit 1752

HVL
10 May 2004

HOA VAN LE
PRIMARY EXAMINER

Hoa Van Le